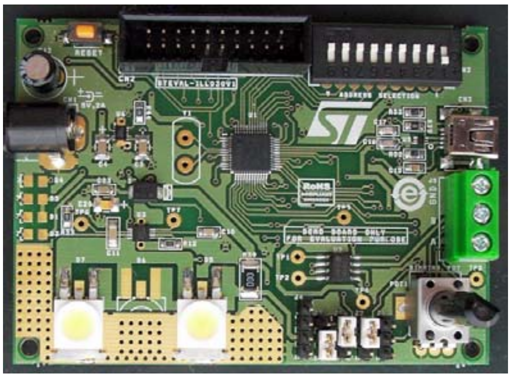
STEVAL-ILL030V1

LED lighting control demonstration board using DMX512 based on the STM32F103C6 and STCS1A

Data brief

Features

- Jumper settings to configure the board in transmitter, receiver or standalone mode
- The STCS1A device provides dimming control of the on-board LEDs
- Over/undervoltage protection using the STBP120 voltage protection device
- Uses the ESDAULC6-3BP6 ESD protection device for advanced USB protection
- Option of powering the LEDs through an external power supply, or through a 5 V power supply output from the STBP120
- Board uses an internal clock source, without a crystal
- Mini-B type USB connector can be used if power for LEDs is supplied separately from external source
- RoHS compliant



STEVAL-ILL030V1

Description

The purpose of the STEVAL-ILL030V1 demonstration board is to demonstrate the performance of ST devices in an LED lighting control application, using the DMX512 communication protocol demonstration firmware in transmitter, receiver and standalone modes.

The USART (universal synchronous asynchronous receiver transmitter) module of the STM32F103C6 ARM 32-bit Cortex™-M3 microcontroller is used to transmit/receive data via an RS-485 transceiver. The transmitter sends DMX512 packets with a NULL START code, according to the DMX512 2008 standard.

1 Schematic diagrams

Figure 1. STM32F103C6 microcontroller section

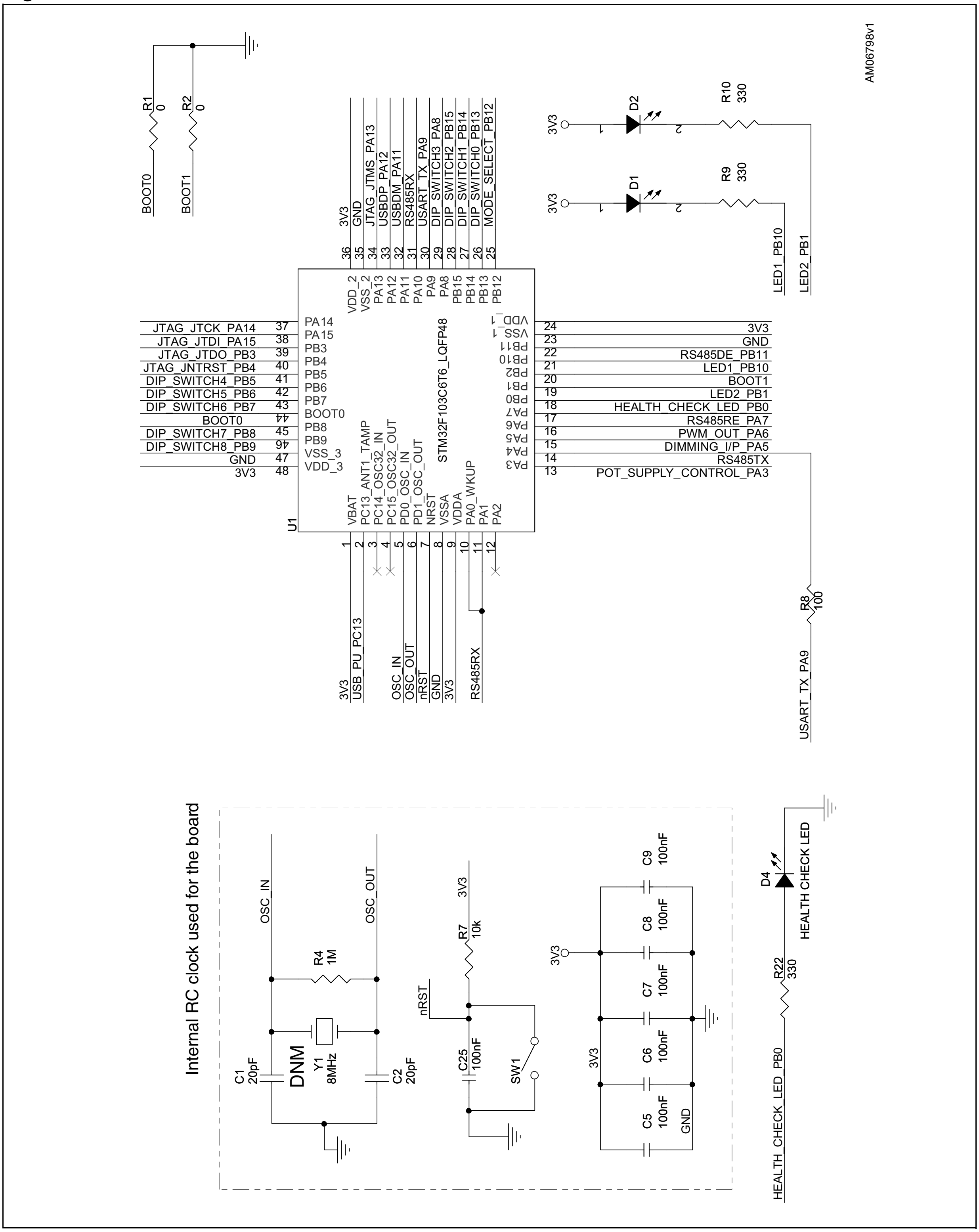


Figure 2. ST485AB section

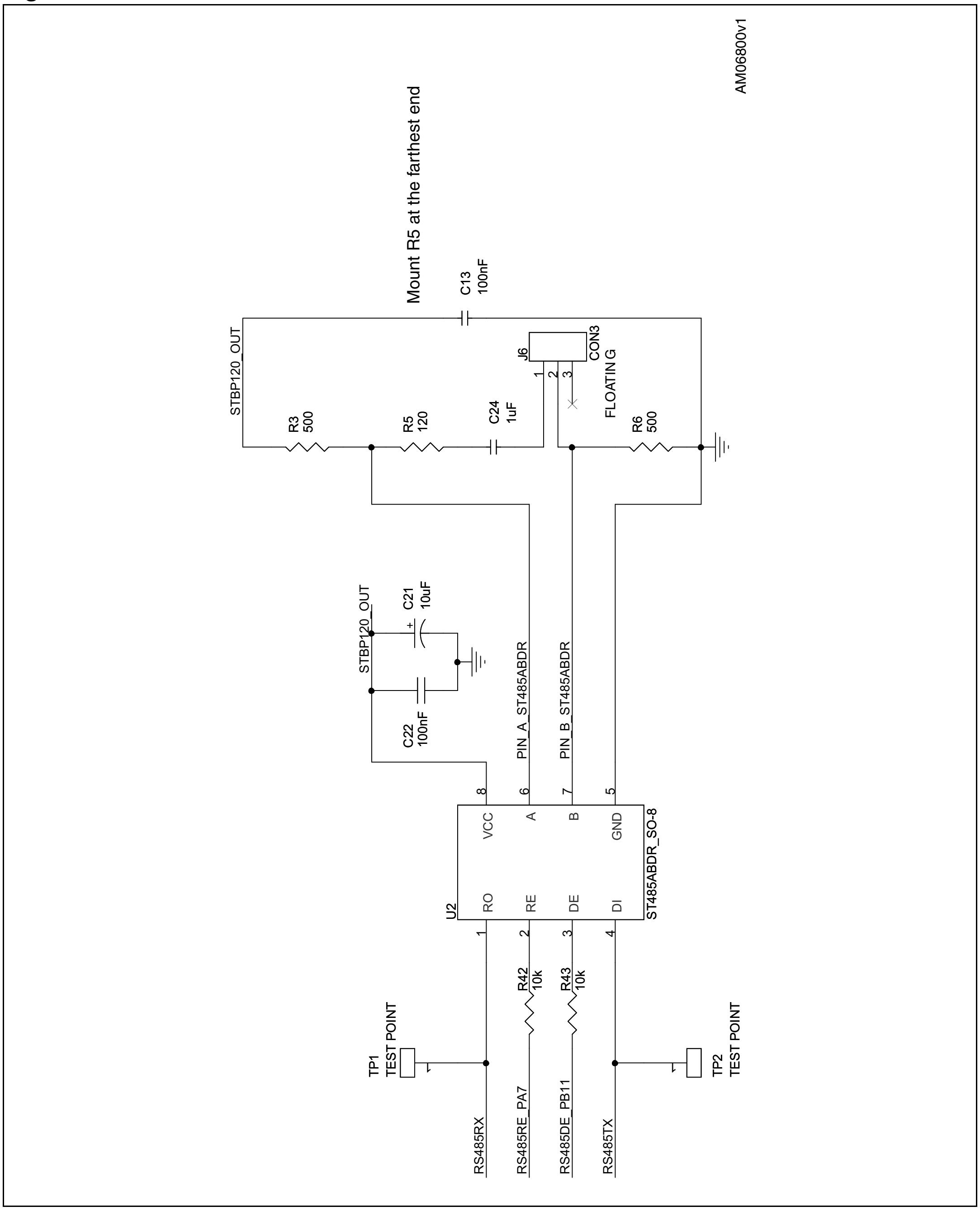


Figure 3. DIP switch section

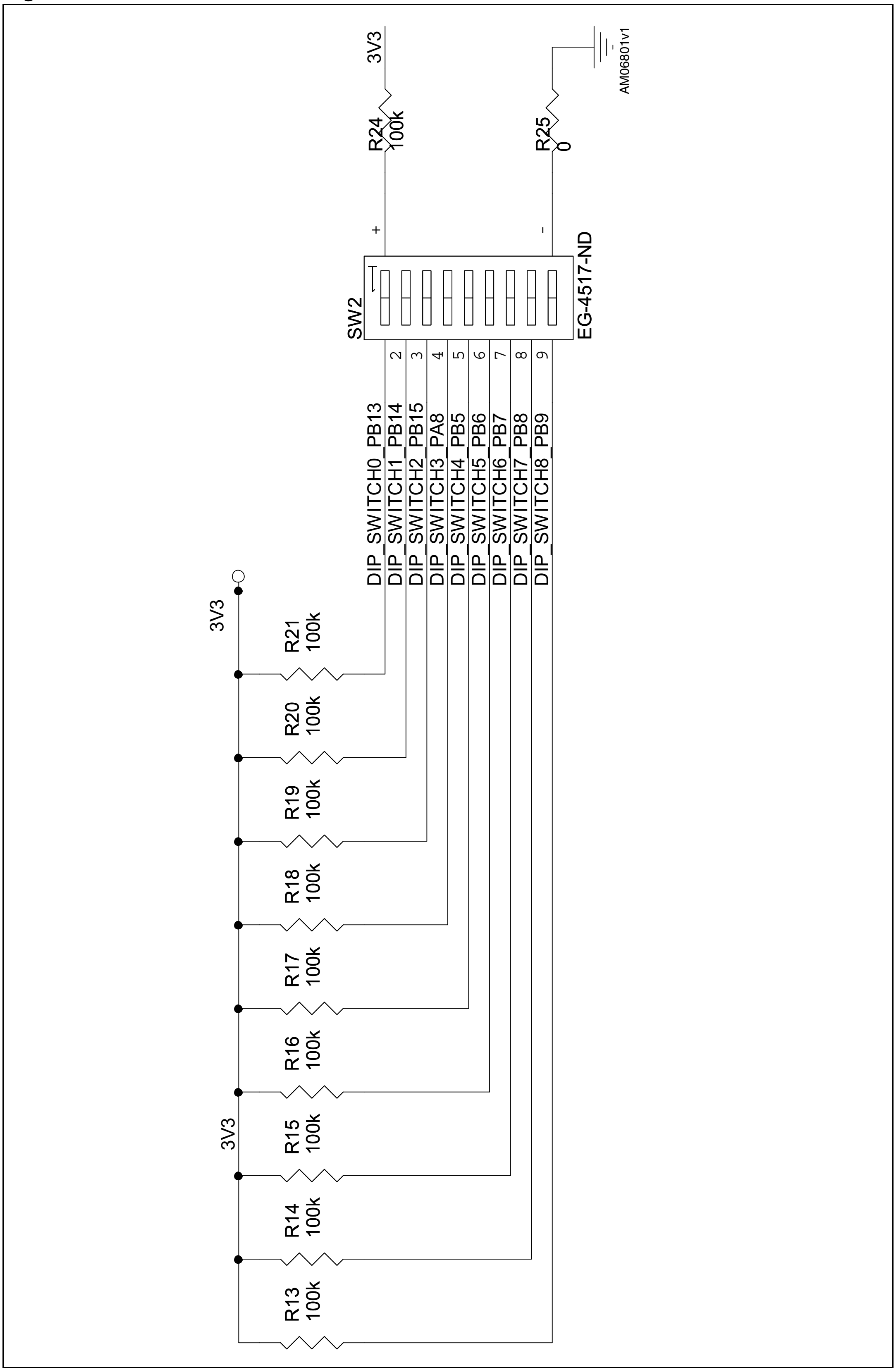


Figure 4. 3.3 V output section

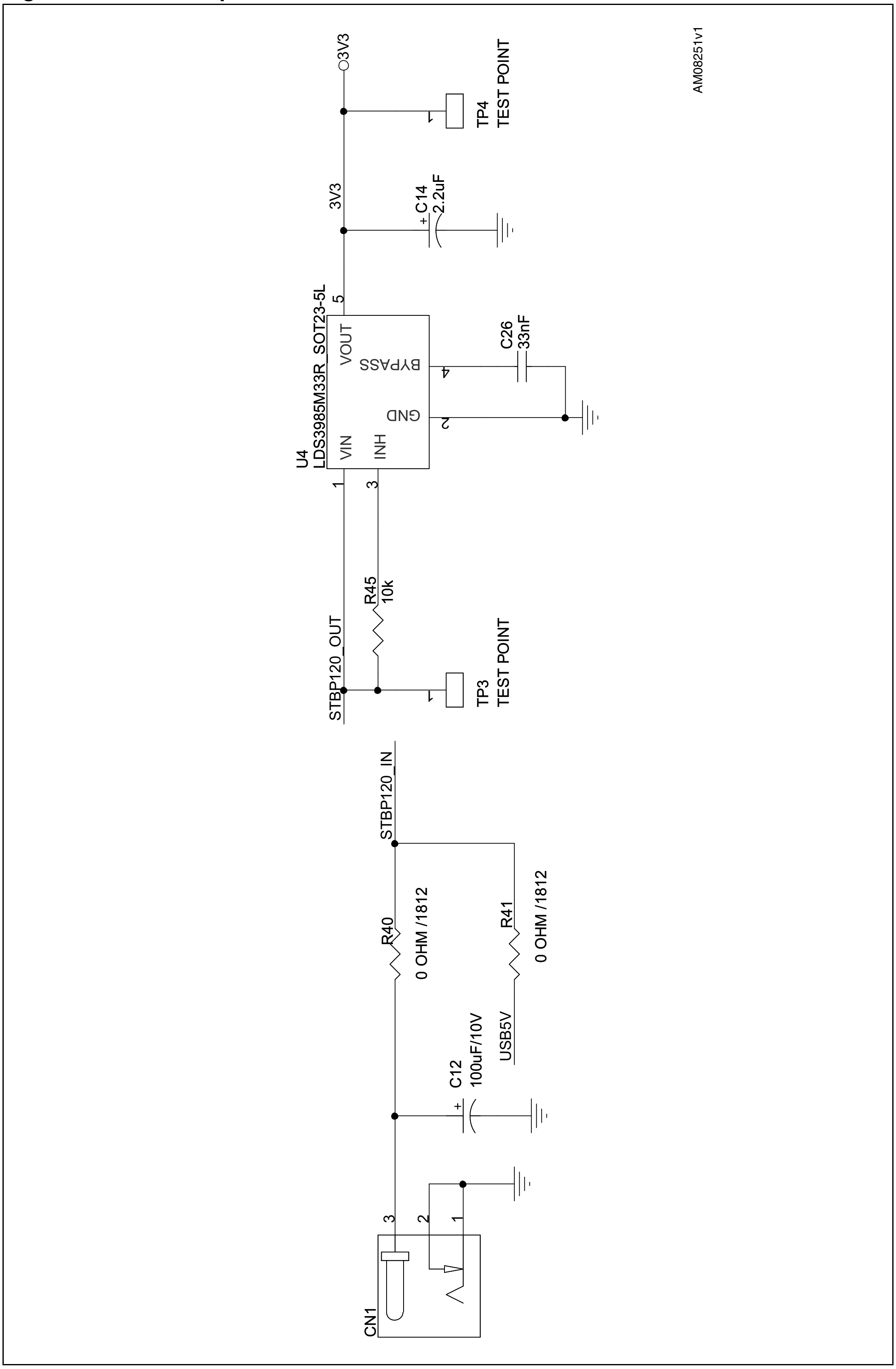


Figure 5. JTAG connector section

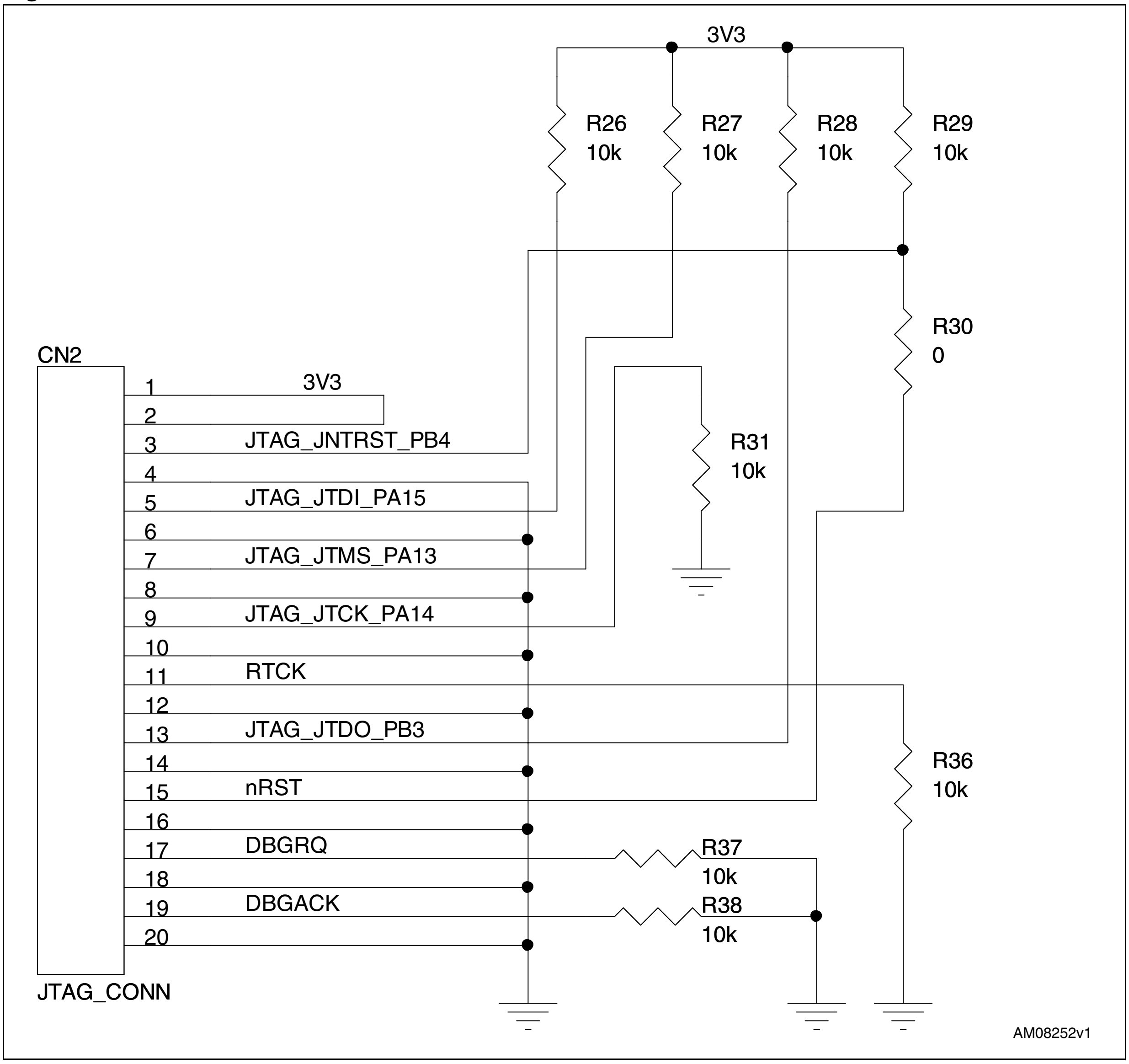


Figure 6. USB section

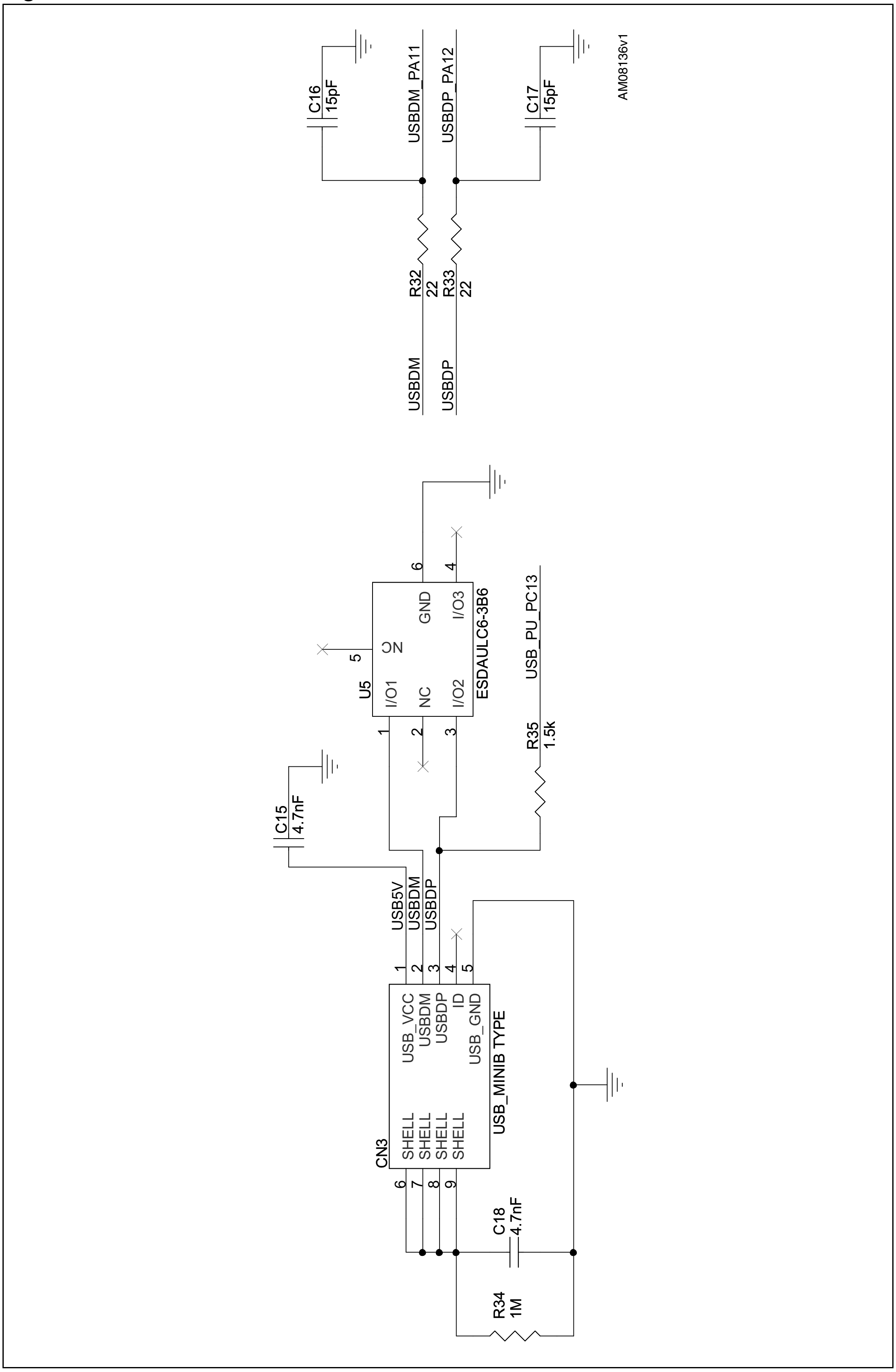


Figure 7. STCS1A LED driver section

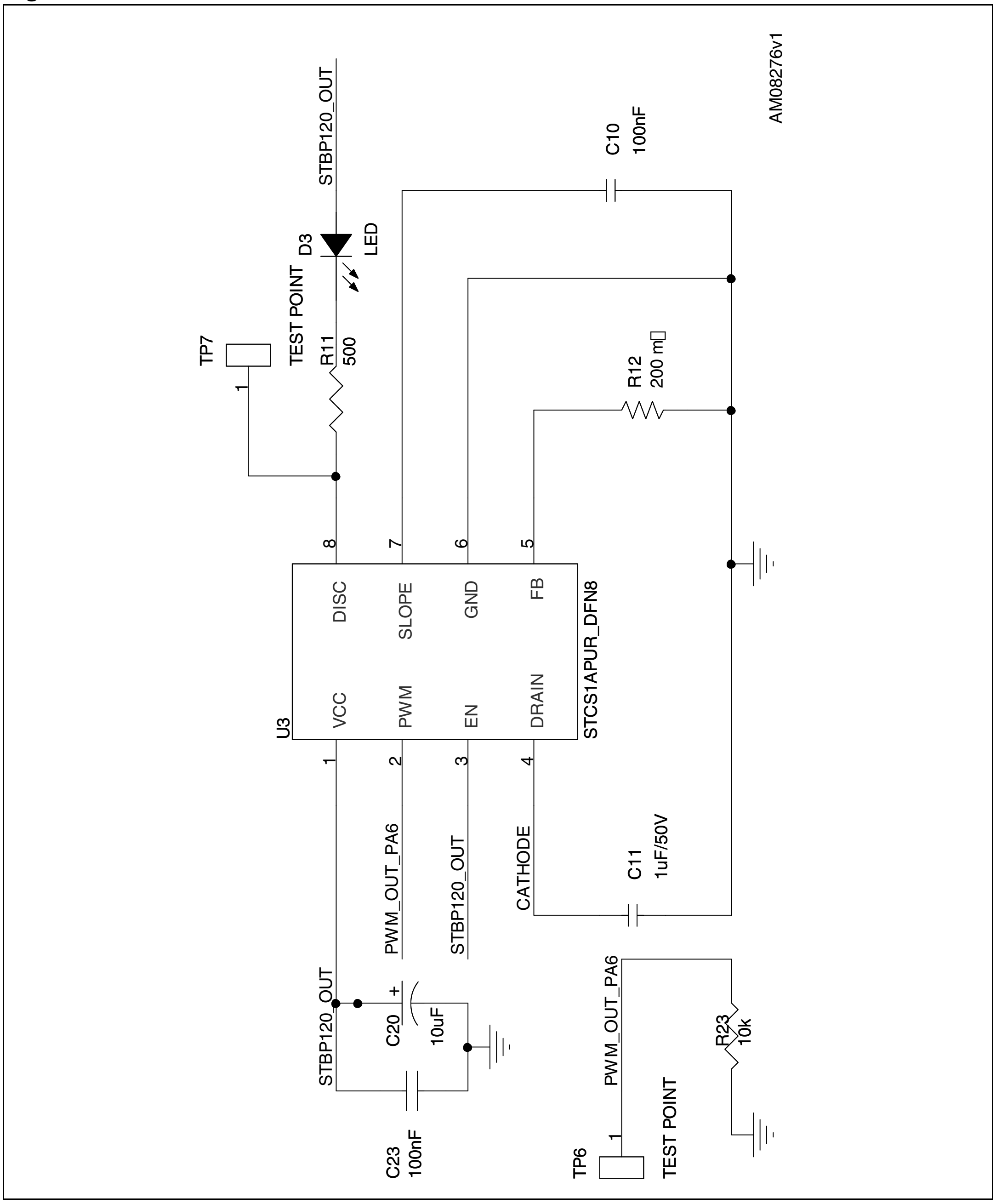


Figure 8. STBP120 section

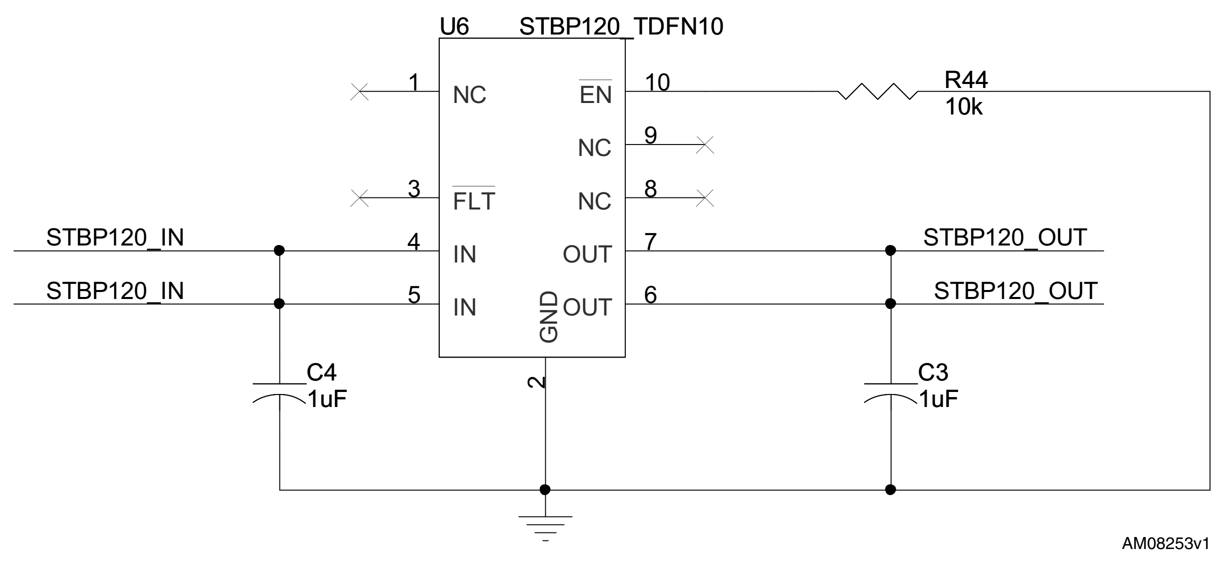


Figure 9. Jumpers

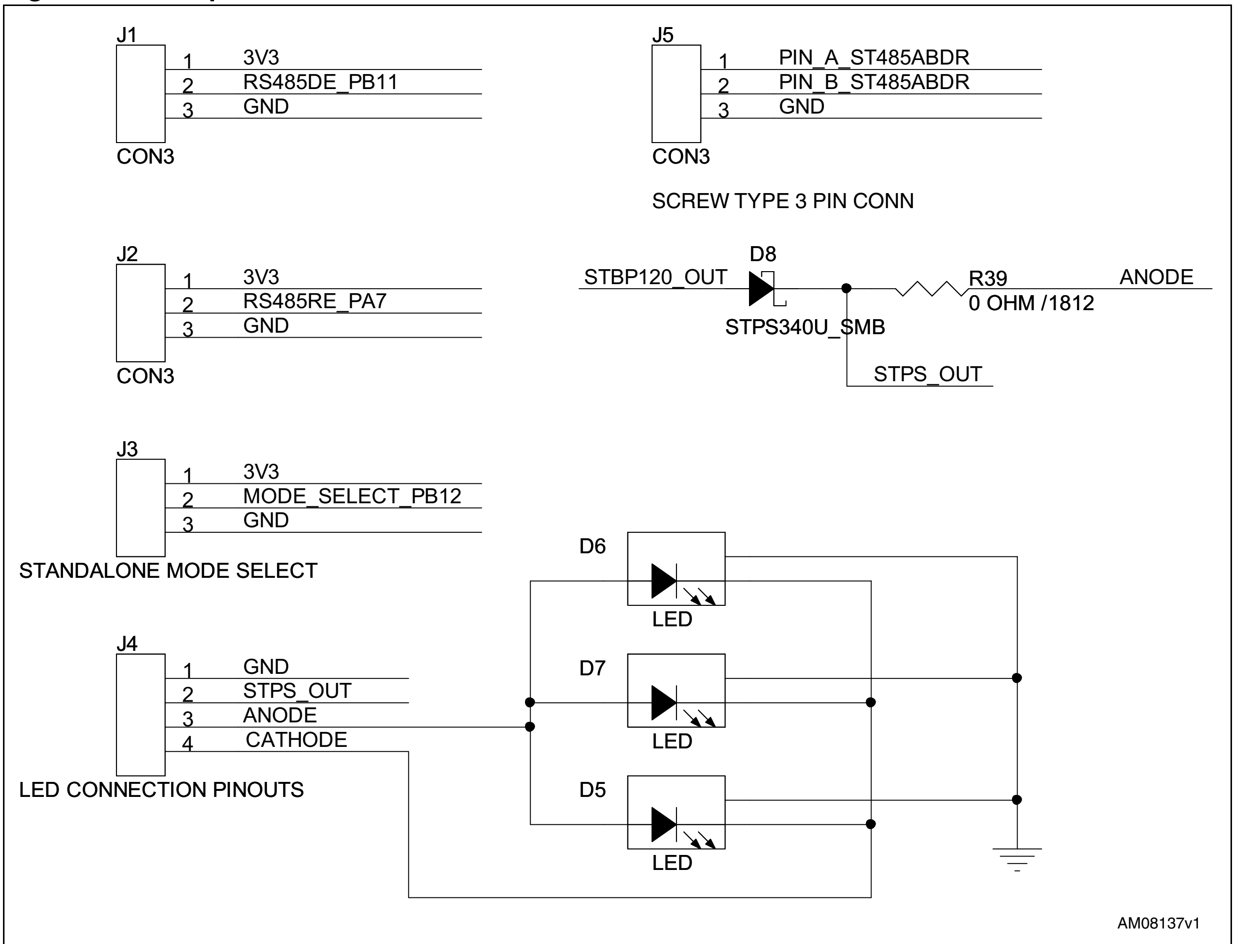
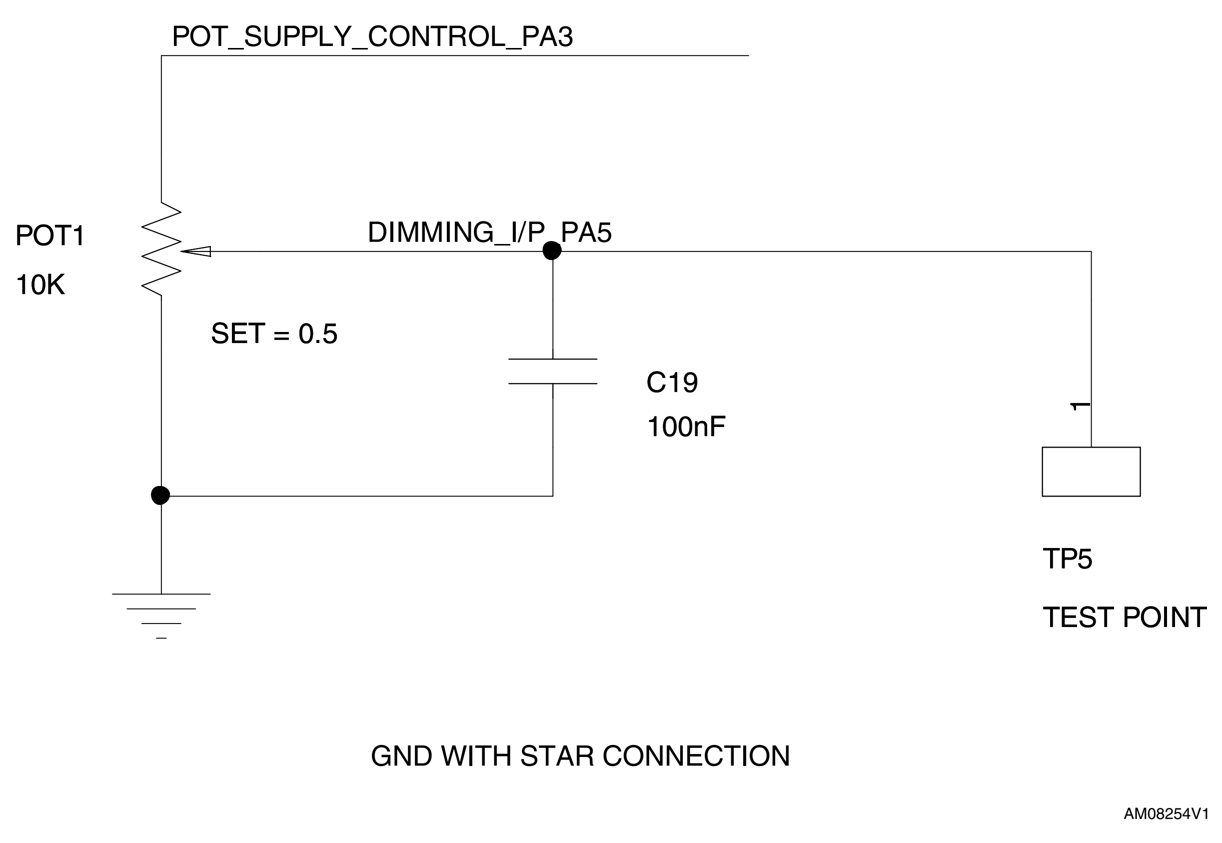


Figure 10. Dimming input POT



2 Revision history

Table 1. Document revision history

Date	Revision	Changes
24-Nov-2010	1	Initial release.